QUALITATIVE EVIDENCE SYNTHESIS: BOOT CAMP FOR NEW RECRUITS

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THE (NOT SO PLEASANT) EXPERIENCE THAT MOVED ME FROM EFFECTIVENESS REVIEWS TO QUALITATIVE SYNTHESIS

Part 1

Meet Emma

Born the 6th of October 2010

Meet Emma

Born the 6th of October 2010
Little sister of Door and Polle

MAIN QUESTION:
How do I get rid of the extra pounds I gained after having delivered a couple of children?

Meet Emma

Born the 6th of October 2010
Little sister of Door and Polle

'BIASED' TRANSLATION:
What interventions have proven to be effective to loose weight post-partum?

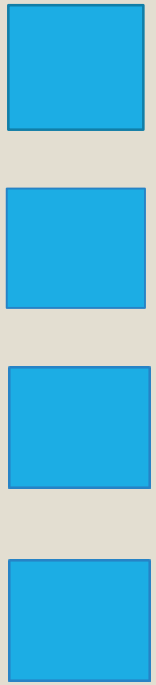
Evidence of what?

- **Evidence of 'effectiveness':** the extent to which an intervention, when used appropriately, achieves the intended effect.

IF YOU DON'T KNOW THE ANSWER TO YOUR QUESTION

Where would you go look for it?

I would go and look….



I'd go to the Cochrane or Campbell library!

The answer to my question

- Women who exercised did not lose significantly more weight than women in the usual care group.
- Women who took part in a diet or diet plus exercise program, lost more weight than women in the usual care.
- There was no difference in the magnitude of weight loss between diet and diet plus exercise group.
- The interventions seemed not to affect breastfeeding performance adversely.

A study in the Journal of the American College of Nutritian found that **those who ate cereals where lower in weight compared to those who ate meat and eggs, bread or skipped breakfast.**

The answer to my question

SIMPLE logical reasoning:

- IF a diet helps to loose weight after pregancy
- IF cereals have proven to work well as a diet
- THEN the consumption of cereals will lead to weight loss after pregnancy!
- Right?

Wrong effect!
And then you panic…

… Or you'd go and dig a little deeper!

Weight, Diet, and Physical Activity-Related Beliefs and Practices Among Pregnant and Postpartum Latino Women: The Role of Social Support

Pamela L. Thornton,[1,8] Edith C. Kieffer,[2] Yamir Salabarría-Peña,[3] Angela Odoms-Young,[4] Sharla K. Willis,[5] Helen Kim,[6] and Maria A. Salinas[7]

Weight Loss Programs for Urban-based, Postpartum African-American Women: Perceived Barriers and Preferred Components

Rosanna Setse · Ruby Grogan · Lisa A. Cooper · Donna Strobino · Neil R. Powe · Wanda Nicholson

You'd go and dig a little deeper

Conclusion study 1 (Thornton)

We need community-based, family oriented programs to increase the chance of successful weight reduction.

Conclusion study 2 (Setse)

Weight loss interventions should address the psychological effects of childbearing, affordability and perceptions of body image. They should incorporate family-centred approaches.

What is it?

What type of questions can I answer with them?

What is my choice pallet?

How do I choose amongst the options available?

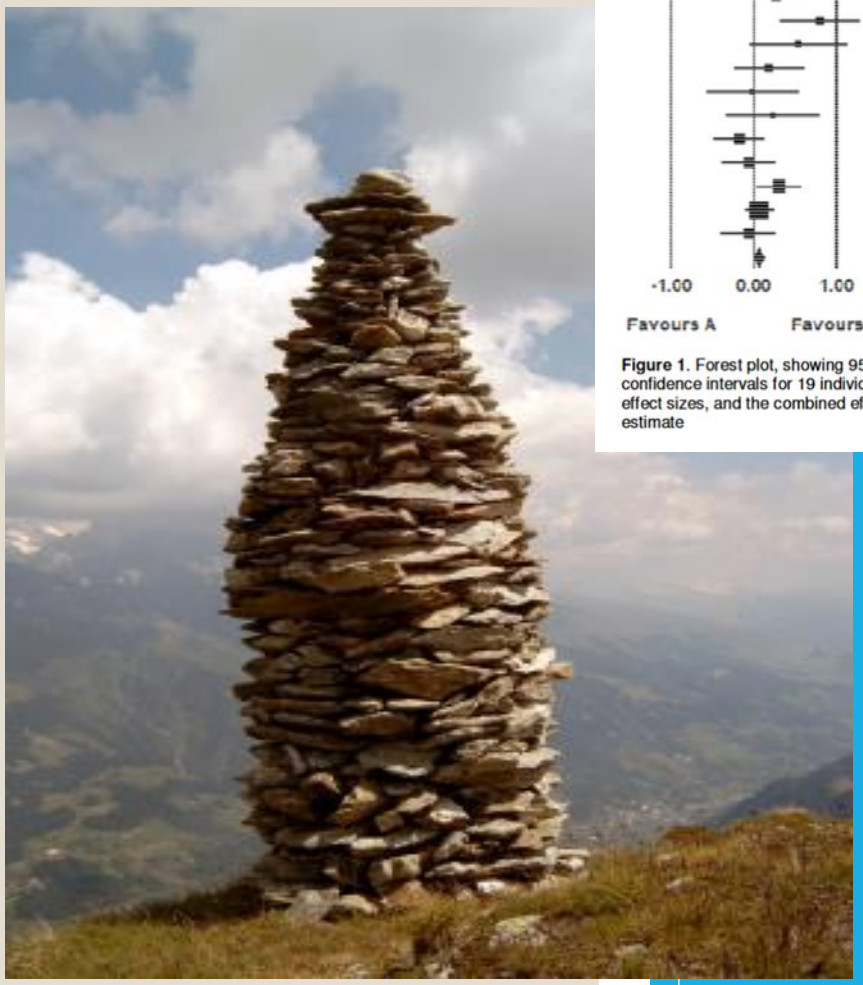
QUALITATIVE EVIDENCE SYNTHESIS

What is it? Conceptualisation Aggregation in a review context

Aggregation refers to ‘adding up’ (aggregating) findings from primary studies to answer a review question…

… to indicate the direction or size of effect

… and our degree of confidence in that finding



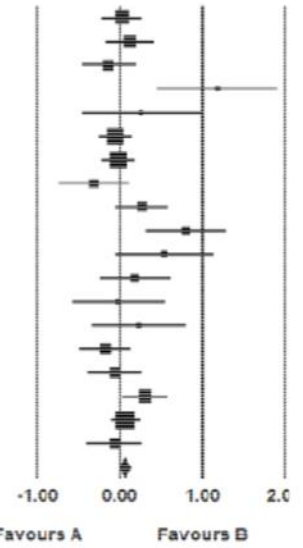


Figure 1. Forest plot, showing 95% confidence intervals for 19 individual study effect sizes, and the combined effect size estimate

Gough D; Thomas J; Oliver S (2012) Clarifying differences between review designs and methods. *Systematic Reviews*. 1(28)

What is it? Conceptualisation Configuration in a review context

Configuration involves the arrangement (configuration) of the findings of primary studies to answer the review question….

… to offer a meaningful picture of what research is telling us

... across a potentially wide area of research

What is it? Conceptualisation

Aggregative ‘quan’? Not necessarily!

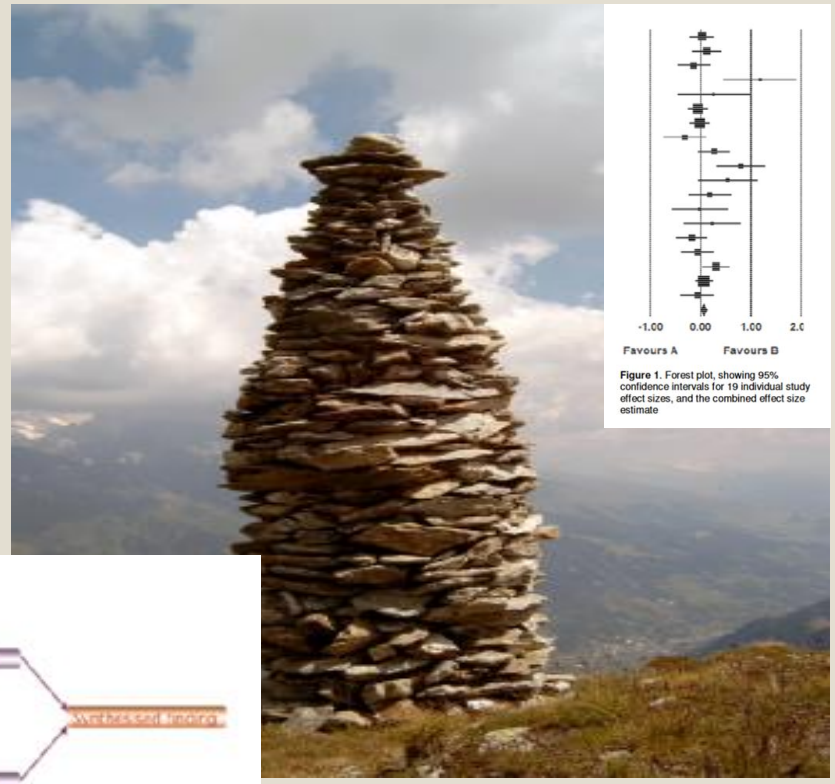
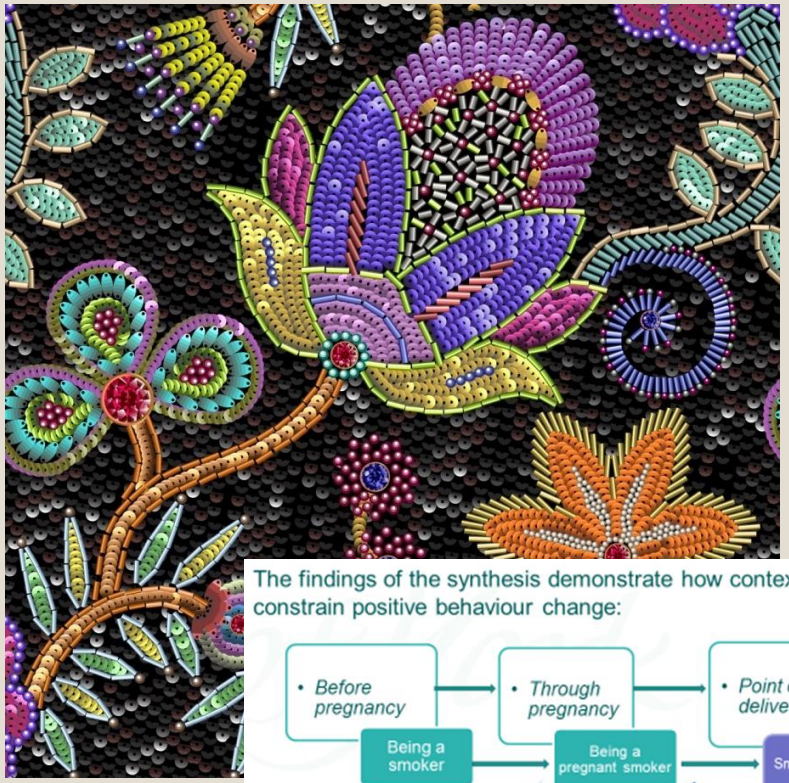


Figure 1. Forest plot, showing 95% confidence intervals for 19 individual study effect sizes, and the combined effect size estimate

OUTCOME

Configurative ‘qual’, YES, although quants sometimes ‘explore’ as well.



OUTCOME

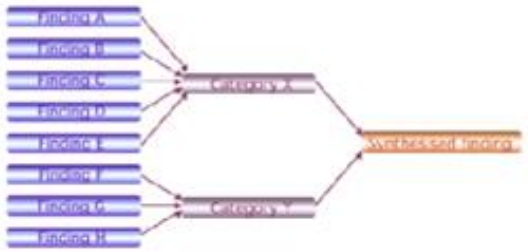


Figure 2. Process of a meta-synthesis, showing an aggregative approach to analysis in which findings are reduced to categories to produce an overall synthesis

What is it?
“A systematic inquiry into meaning”

What is it?

'The process or result of building up separate elements, especially ideas, into a connected whole, especially a theory or system' (Oxford English Dictionary)

Systematic

- Planned
- Ordered/structured
- Transparant audit trail

- "Reconstructed logic of science"

Empirical

- It builds on studies that depend upon the world of experience, on what we can capture with our senses.
  (So actually, it is to be situated on the meta-level rather than the primary study level)

Inquiry into meaning

- Developing a more complex picture of a phenomenon or situation.
- Rich, Deep, Thick, Textured, Insightful, …

Shank, 2006

Review protocol, including review objectives, review question, and MMRS design

Chapter 2

Sampling

Systematic search

In- and exclusion criteria

Chapter 3

Critical appraisal

Chapter 4

Descriptive data extraction

Chapter 5

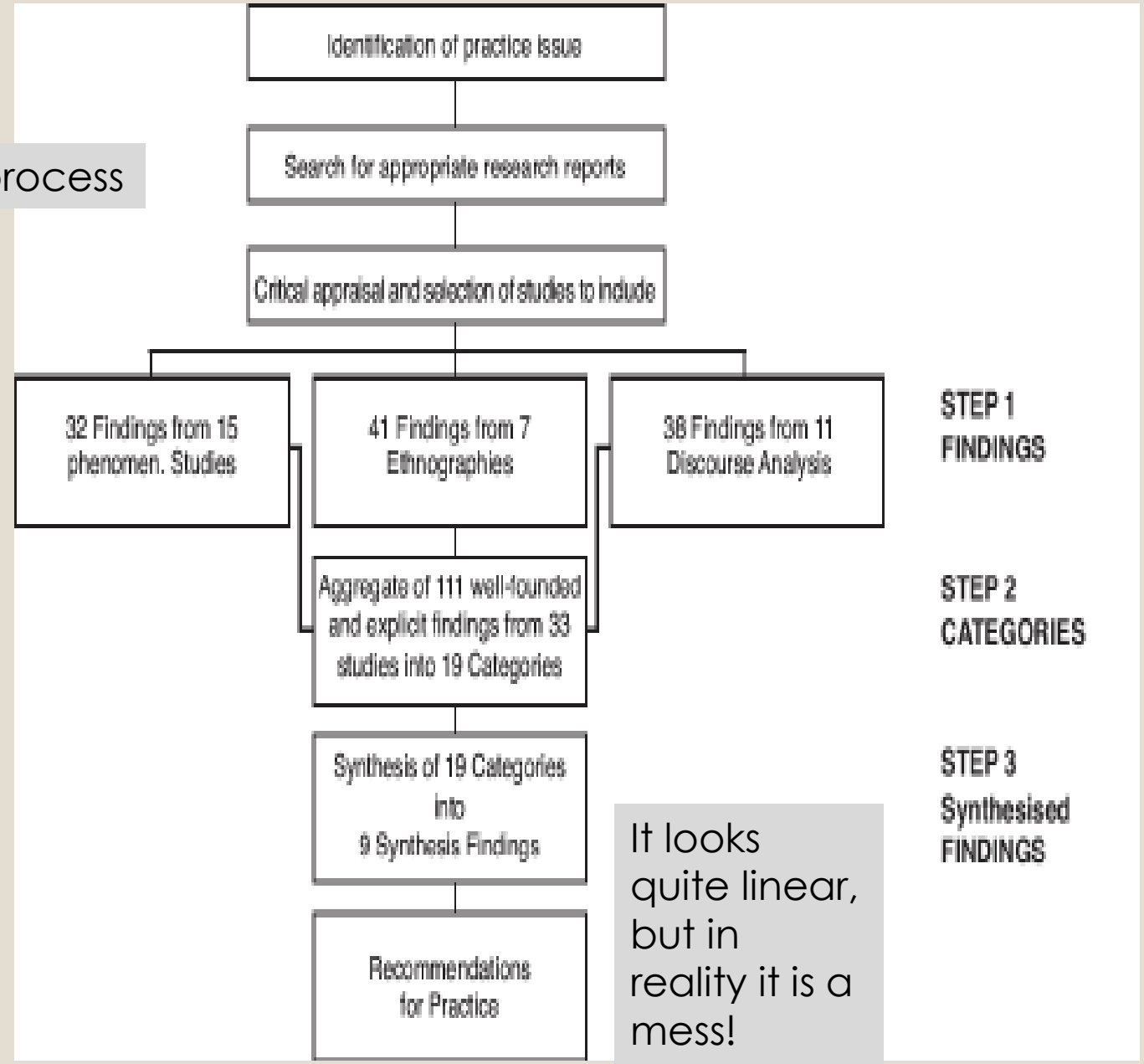
Data synthesis

Chapters 6, 7, 8

Writing and editing the report

Chapter 9

The process



It looks quite linear, but in reality it is a mess!

What type of Questions can we answer?

In the evidence based discourse:

- **Evidence of 'feasibility':** the extent to which an intervention is practical and practicable, whether or not an intervention is physically, culturally or financially practical or possible within a given context.
- **Evidence of 'appropriateness'** the extent to which an intervention fits with a situation, how an intervention relates to the context in which it is given.
- **Evidence of 'meaningfulness':** the extent to which an intervention is positively experienced by the population and relates to the personal experience, opinions, values, beliefs and interpretations of the population.

Apart from that it covers questions related to

- How people experience a certain condition or life circumstances.
- What they value or not and why.
- What exactly impacts on their behavior.
- What obstacles or challenges they come across.
- How particular programs need to be rolled out to meet their needs etc.

Noyes J, Popay J, Pearson A, Hannes K, Booth A. Chapter 20: Qualitative research and Cochrane reviews. In: Higgins JPT, Green S (editors), *Cochrane Handbook for Systematic Reviews of Interventions* Version 5.1.0 (updated March 2011). The Cochrane Collaboration, 2011. Available from www.cochrane-handbook.org.

What is my choice pallet?

- Qualitative Systematic Review
- Qualitative Meta-Synthesis
- Qualitative Research Synthesis

Qualitative Evidence Synthesis

- A huge big…

What is my choice pallet?

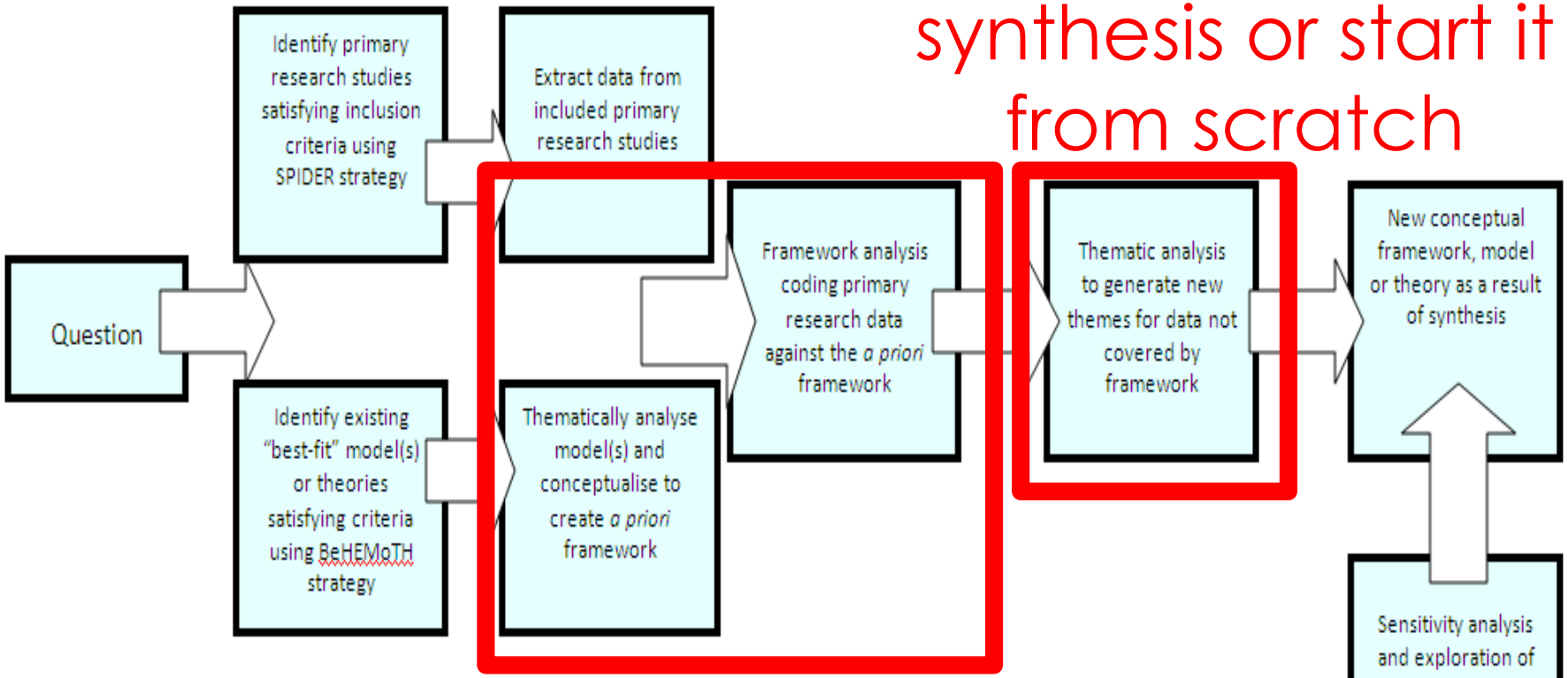
Choice pallet:
What is it that different approaches synthesizing findings from primary studies do?

- Produce theories or models that are based on phenomena involving processes of contextualised understanding and action (**Grounded theory**)
- (Rapidly) respond to a review need for evaluating an intervention's appropriateness, acceptability and effectiveness (**Thematic analysis/Framework synthesis**)
- Bring together separate findings into an interpretive explanation that is greater than the sum of the parts (**Meta ethnography**)
- Critically approach the literature in terms of deconstructing research traditions or theoretical assumptions (**Critical interpretive synthesis**)
- Summarize evidence in order to develop lines of action for practice and policy (**Meta-aggregation**)
- Unpicking the mutually interdependent relationships between persons and environments, by formulating patterns 'With this intervention, these outcomes occur with these population foci and in these settings (**Ecological triangulation**)
- Bring together research of widely different designs and paradigms (**Meta-narrative)**

Configurative review,
but based on the principle of **integration**

CODING
CATEGORIZING
DEVELOPMENT OF THEMES

Figure 1. Systematic review using best-fit framework synthesis



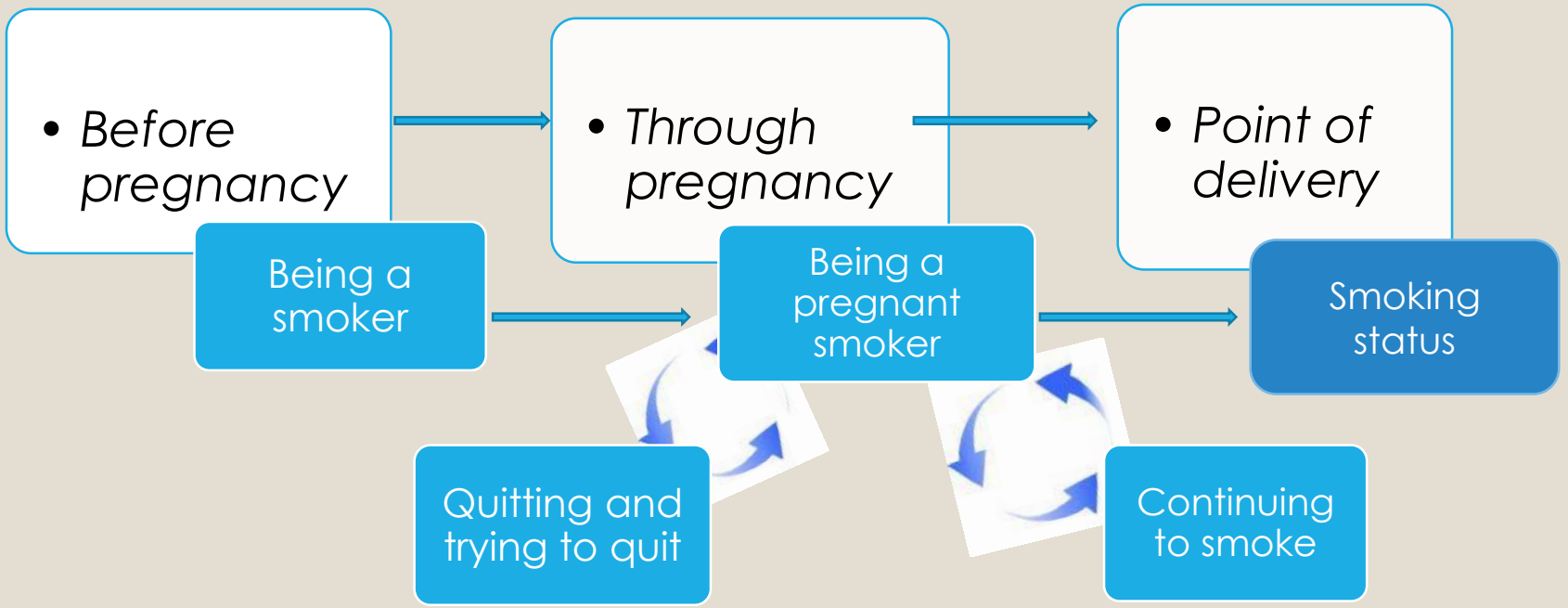
Add thematic synthesis or start it from scratch

Framework synthesis

START WITH CONCEPTUAL OR LOGIC MODEL/THEORETICAL FRAMEWORK AND TEST DATA from published studies AGAINST IT

Configurative review,
but based on the principle of **interpretation**

Meta-ethnography: The findings of the synthesis demonstrate how contexts constrain positive behaviour change:



MODEL IS END PHASE OF THE REVIEW

Making a choice between approaches is not always simple.
If you are conducting qualitative research, how do you generally choose between designs and techniques available?

- …
- Methodological Expertise in Team
- Available Resources
- Frequency of Use of Method
- Popularity/"Sexiness" of Method
- What a friend/ colleague/ mentor has used or recommends
- Bad experiences of others
- Good experiences of others
- Type of Question (fixed or open)
- Extent of Description versus Interpretation
- Role of Theory in your study
- Type of Data Available (rich or thin)
- Intended Output (theory, lines of action, overview…)
- By Examining Methods Overviews and Published Examples
- …

Making a choice between approaches is not always simple.
If you are conducting qualitative research, how do you generally choose between designs and techniques available?

Is Your Question……

- **Fixed?** – Pre-defined as a PICO (Population-Intervention-Comparison-Outcome) or SPICE (**S**etting-**P**erspective- **I**nterest, Phenomenon of – **C**omparison- **E**valuation) – Question is an "Anchor"
  Negotiable? – To be explored as part of initial review process – Becomes clearer as you examine data (cp. Grounded theory approaches) – Question is a "Compass"

Will You Describe or Interpret?

- **Description** – What does the data say? – factual reporting of "**epidemiology"** of studies, themes etc…
- Reader does work of interpretation
- **Interpretation** – What does the data mean? – **"diagnosis"** – subjective interpretation of "signs and symptoms" from data and themes etc…
- Reviewer does work of interpretation – may be contested

Will You Generate, Explore, Test Theory

- **Generate** – may require "suspension of disbelief" – quality assessment/value judgement may come later (cp. Brainstorming)- **Grounded Theory, Meta-ethnography**
- **Explore** – looking for patterns - **Narrative Synthesis, Thematic Synthesis**
- **Test** – quality assessment differentiates well-supported and unsupported data - **Framework Synthesis (**incl. **Best Fit Synthesis)**

How Rich ("Thick") is Your Data?

- Qualitative data from "thin" studies (or textual responses to surveys) will not sustain interpretive approaches
- Limited to **Meta-Aggregation**, **Thematic Synthesis**, **Framework Synthesis**, **Narrative Synthesis** –type approaches
- Rich/"Thick" reports will sustain Meta-Ethnography/Grounded Theory – may allow selective sampling/ theoretical saturation
- *NB. Is "Unit of Analysis" Individual Study (**Meta-Aggregation**, **Thematic Synthesis**) or "Body of Evidence" (e.g. **Meta-Narrative** or **Critical Interpretive Synthesis** approaches) or even Theory (**Framework Synthesis**/**Best Fit Synthesis**)?*

What is Your Intended Output?

- "the output of some methods of synthesis (**Thematic Synthesis**, textual **Narrative Synthesis**, **Framework Synthesis**, and ecological triangulation) is **more directly relevant to policymakers and designers of interventions** than the outputs of methods with a more constructivist orientation (**Meta-Study**, **Meta-Narrative**, **Meta-Ethnography**, **Grounded Theory**, **CIS**) which are generally more complex and conceptual" (Barnett-Page & Thomas, 2009)
- **Thematic Synthesis** (including **Meta-Aggregation**) and **Framework Synthesis** produce findings that directly inform practitioners (Thomas & Harden, 2009)
- Interpretive approaches (e.g. **CIS**, **Meta-Ethnography**) produce a model that requires practitioners to interpret relevance and applicability to their own context
- **Narrative Synthesis** or **EPPI-Centre** (matrix) methods may help to integrate and present quantitative/qualitative work

SYNTHESIS QUIZ

For each of the following scenarios **identify** the review characteristics and **try to match** to an appropriate type of synthesis

For each of the cases, consider:

1. Role of Theory
2. Expertise
3. Describe/Interpret
4. Output/Product

Scenario A:

You are working as a group of topic experts and experienced qualitative researchers to examine the phenomenon of “Willingness to Hasten Death”. There are less than eight rich qualitative studies. No-one has yet conducted a synthesis to look at what is meant by the concept. Your review will help those who work in terminal care to gain a better understanding of the phenomenon.

Consider:

1. Role of Theory
2. Expertise
3. Describe/Interpret
4. Output/Product

Scenario B:

You are a member of a government-funded Institute producing best practice reviews for nurses and nursing managers. You are asked to examine all evidence, quantitative and qualitative, for physical restraint in residential homes. You are expected to turn around a report in a very short time frame. Your final review is expected to include Recommendations for Practice.

Consider:

1. Role of Theory
2. Expertise
3. Describe/Interpret
4. Output/Product

That's it?

Can we start?

No

You probably still have to figure out who you are as a review author.

The researcher's worldview

The reviewer's worldview

Qualitative Inquiry

Qualitative Science

Idealist ⟷ **Realist**

Meta-narrative	Critical interpretive synthesis	Meta-ethno-graphy	Grounded theory	Thematic synthesis	The JBI meta-aggregative approach	Framework synthesis	Ecological triangulation
Subjective idealism	Subjective idealism	Objective idealism	Objective idealism	Critical realism	Critical realism	Critical realism	Scientific realism

There is no shared reality independent of multiple alternative human constructions

There is a world of collectively shared understandings:

Knowledge of reality is mediated by our perceptions and beliefs

It is possible for knowledge to approximate closely an external reality

Spencer, 2003

Based on Barnett-Page and Thomas, 2009

Qualitative Scientists

"To see means"

- Clarity
- Neutrality

"What you see, is what you get." → Transparancy

REMAIN CLOSE TO THE DATA AS REPORTED BY THE AUTHORS OF PRIMARY STUDIES!

Masters of the window

Qualitative Scientists

Quality appraisal

- Check the credibility of the findings in terms of an accurate display of people's voices reported by the author of the primary study
- Check the means to correct for the impact of the researcher on the findings
- Check whether the conclusions are grounded in the data

Before using it for decision making processes

Qualitative Inquirists

"TO see means"

- To step in someone else's shoes
- To explore the dark corners or gaps in our knowledge base
- To go beyond what has been reported in the primary studies
- To problematize existing literature

"Shed light where there has been no light before" → ILLUMINATION

ASSIGN A MAJOR ROLE TO THE REVIEW AUTHOR FOR DEVELOPING NEW BLUEPRINTS BASED ON THE DATA from primary studies AND LEAVE ROOM FOR INTERPRETATION!

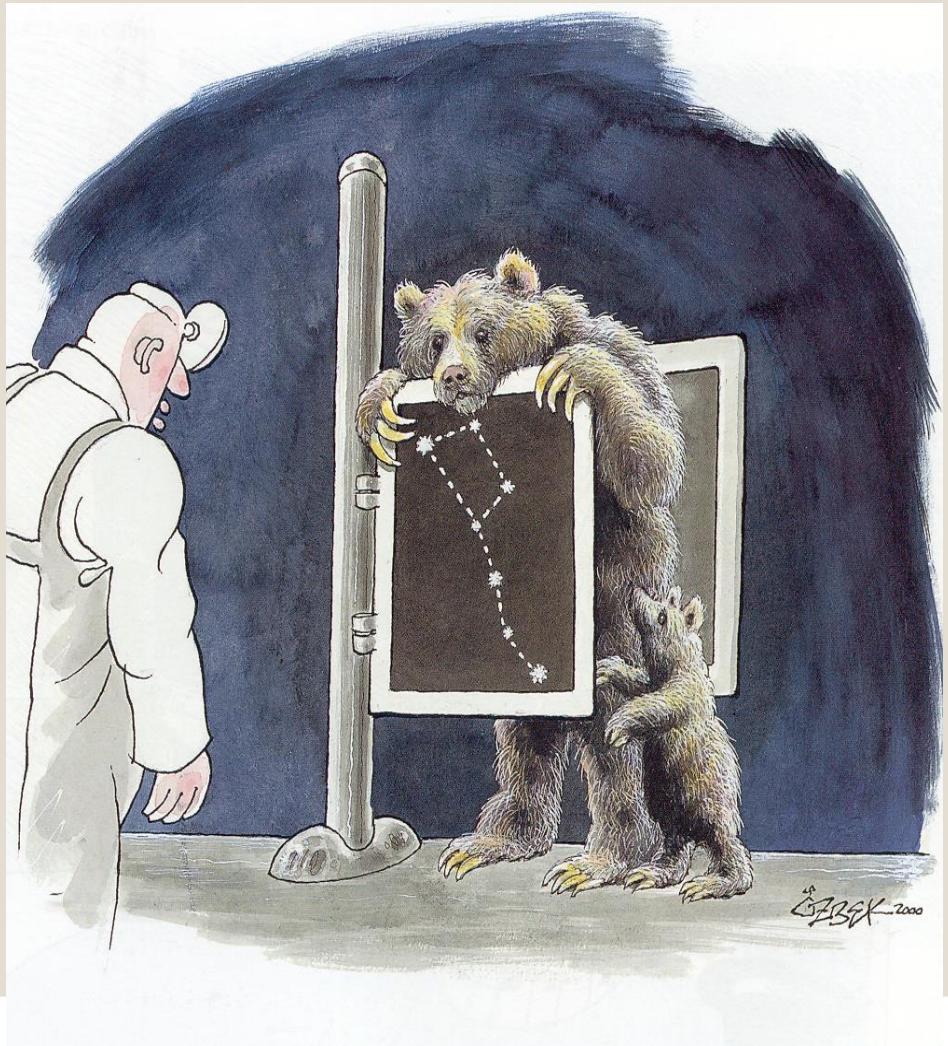
MASTERS OF THE LANTERN

Qualitative Inquirists

QUALITY OF THE STUDY

- the process of systematically examining research evidence to assess its relevance and utility for the story line to be developed.

before using it to inform a decision

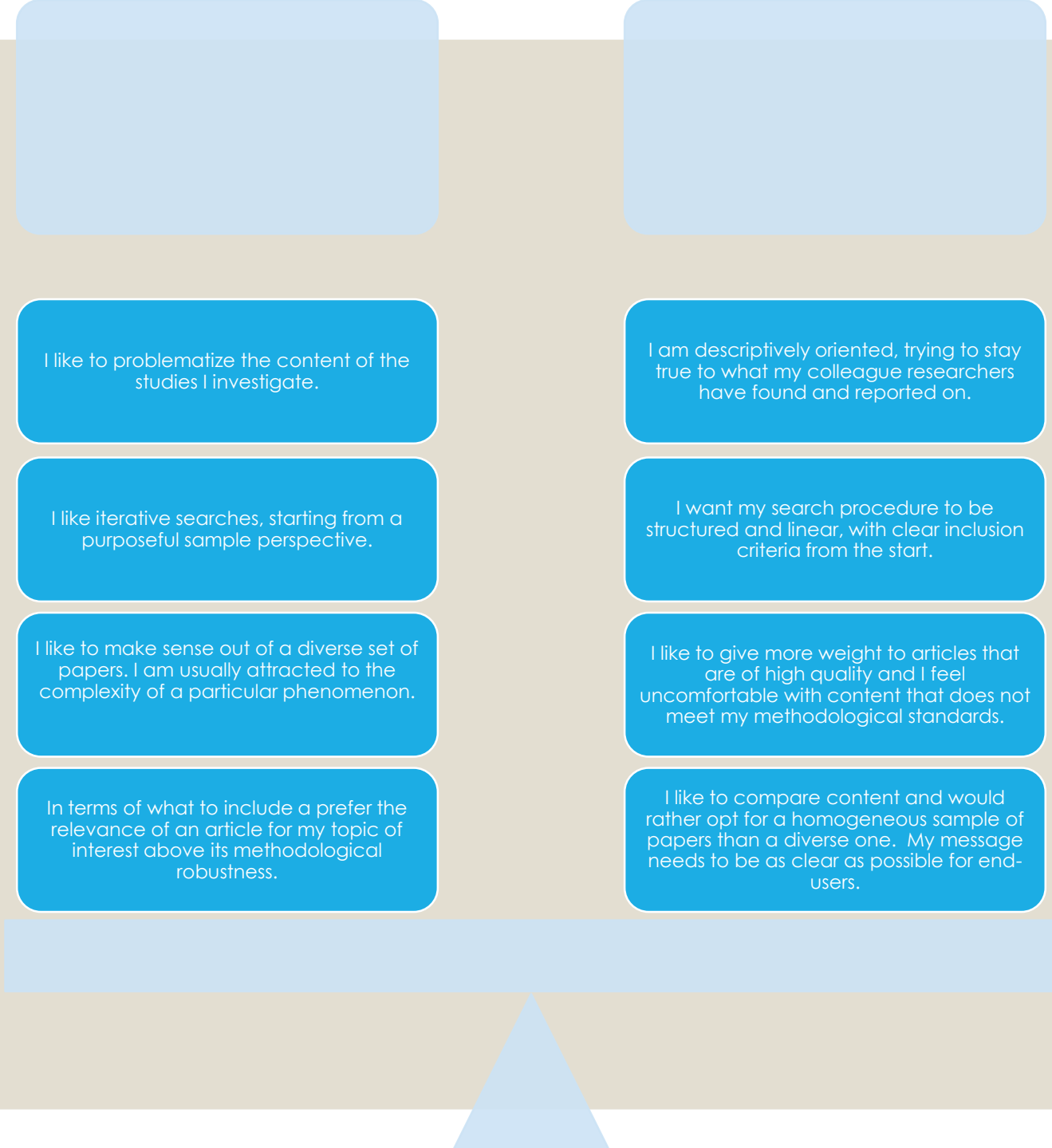


WHICH CAMP ARE YOU IN?

How tolerant are you to the amount of structure and ambiguity that is inherent in the synthesis method?

Is your epistemological stance congruent with that of the synthesis method?

Philosophical stance test



Philosophical stance test

Idealist	Realist
I like to problematize the content of the studies I investigate.	I am descriptively oriented, trying to stay true to what my colleague researchers have found and reported on.
I like iterative searches, starting from a purposeful sample perspective	I want my search procedure to be structured and linear, with clear inclusion criteria from the start.
I like to make sense out of a diverse set of papers. I am usually attracted to the complexity of a particular phenomenon.	I like to give more weight to articles that are of high quality and I feel uncomfortable with content that does not meet my methodological standards.
In terms of what to include a prefer the relevance of an article for my topic of interest above its methodological robustness	I like to compare content and would rather opt for a homogeneous sample of papers than a diverse one. My message needs to be as clear as possible for end-users.

PRAGMATIST

The reviewer's worldview

Qualitative Inquiry

Qualitative Science

Idealist ⟷ **Realist**

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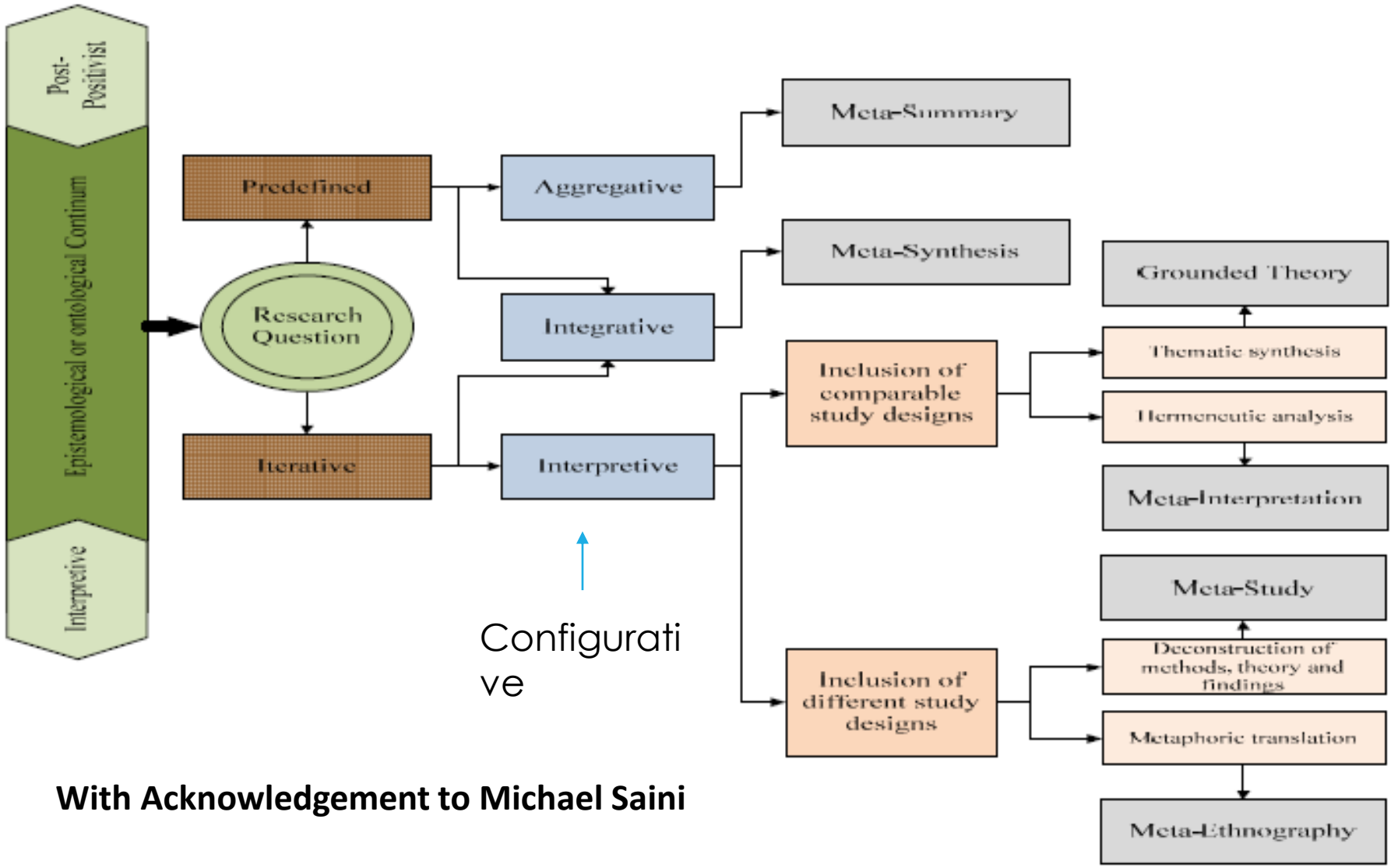
PRELIMINARY REVIEW PRACTICE

Duo-job!

1. Define your philosophical stances, based on your test results, and identify any conflicts between the two of you that may complicate a review process.
2. Formulate your own qualitative review question you intend to answer, based on your knowledge of what a QES can answer. Define your population of interest, your topic of interest, your setting and what you intend to evaluate (experiences, opinions, viewpoints, actions,…)
3. Decide on a particular goal for your project, based on your knowledge of what different approaches can do.
4. Make a selection of approaches that might work well for you.
5. Wrap up your final choice for an approach by taking into account:
    1. Role of Theory
    2. Expertise
    3. Describe/Interpret
    4. Output/Product

Decision Tree for Choosing a Method for Qualitative Synthesis



Configurative

With Acknowledgement to Michael Saini

WORKED EXAMPLE

- **Meta-ethnography**
- Meta-summary
- Meta-study
- Realist synthesis
- Meta-narrative mapping
- Critical Interpretive Synthesis
- Narrative Synthesis
- Textual narrative synthesis
- Ecological triangulation
- **Framework synthesis**
- Meta-interpretation
- **Meta-aggregation**
- Bayesian meta-analysis
- Content analysis
- Case Survey
- Qualitative Comparative analysis
- **Thematic synthesis**
- Cross-case analysis
- Formal Grounded theory
- …
- Mixed-method synthesis

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The Meta-Aggregative Approach to Synthesis

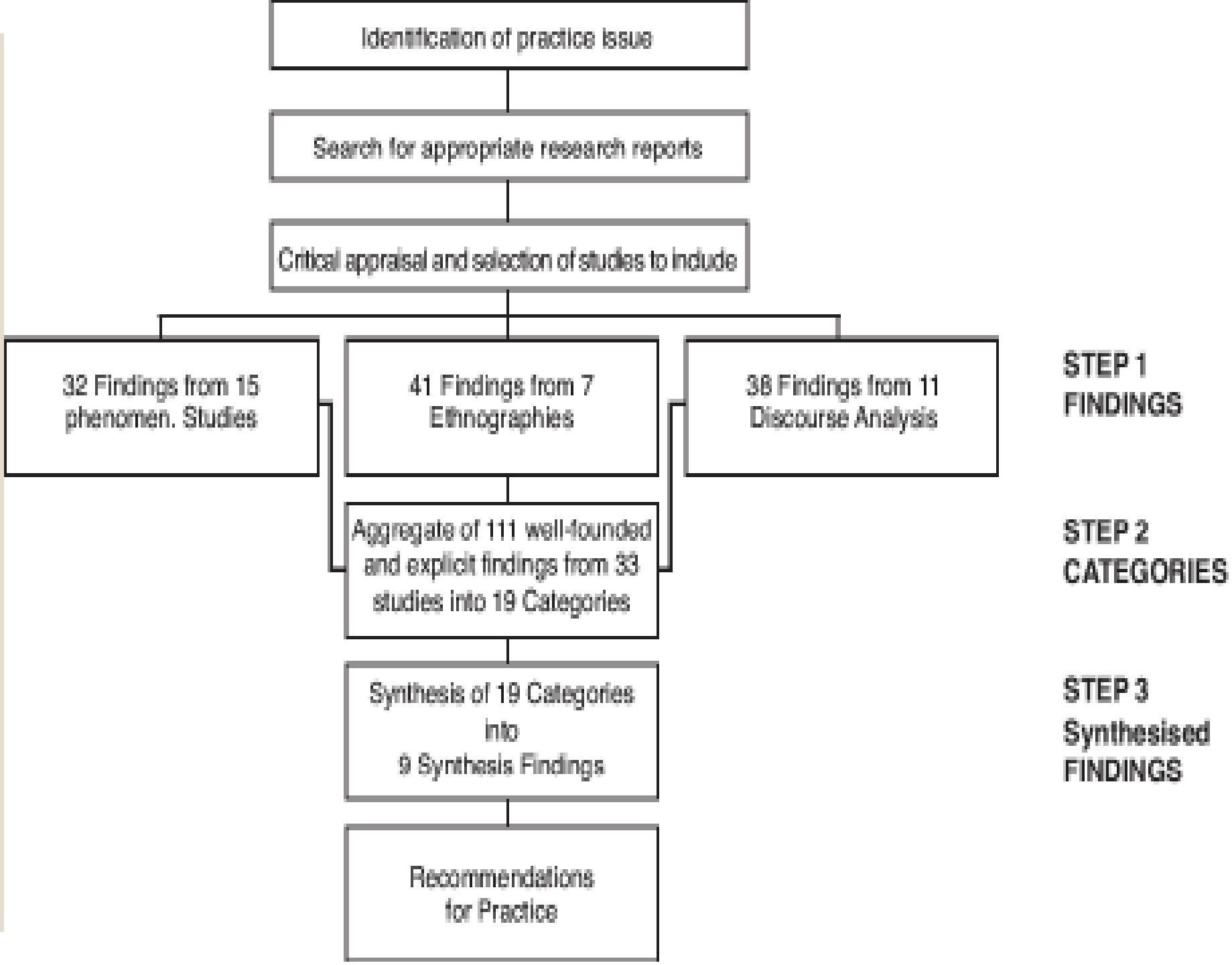
The Methodology of Qualitative Evidence Synthesis (QES)

There are over 20 different approaches to qualitative evidence synthesis!

The meta-aggregative approach

- An approach to QES designed to model the Cochrane and Campbell process of systematic reviews summarizing results of quantitative studies, whilst being sensitive to the nature of qualitative research and its traditions (Pearson, 2004).
  - Based on an **a-priori protocol,** with established, answerable question, explicit criteria for inclusion and a documented review of methods for searching, appraisal, extraction and synthesis of data

- Inspired by the founding fathers of American pragmatism, it concentrates on the original researcher's processed data and summarizes common and competing findings to produce cross-generalisations that lead to 'lines of action' (Hannes & Lockwood, 2011).
  - the value of any thought lies in its **practical use and consequences**. It is the focus on practical consequences that characterizes meta-aggregation as a synthesis approach.


Identification of practice issue
Search for appropriate research reports
Critical appraisal and selection of studies to include
32 Findings from 15 phenomen. Studies
41 Findings from 7 Ethnographies
38 Findings from 11 Discourse Analysis
STEP 1 FINDINGS
Aggregate of 111 well-founded and explicit findings from 33 studies into 19 Categories
STEP 2 CATEGORIES
Synthesis of 19 Categories into 9 Synthesis Findings
STEP 3 Synthesised FINDINGS
Recommendations for Practice

Hannes K[1], Raes E[2], Vangenechten K[1], Heyvaert M[1], Dochy F[2].

(Educational Research Review, 2013).

Experiences from Employees with Team Learning

- A worked example of the meta-aggregative approach to qualitative evidence synthesis

1. Methodology of Educational Sciences Research Group

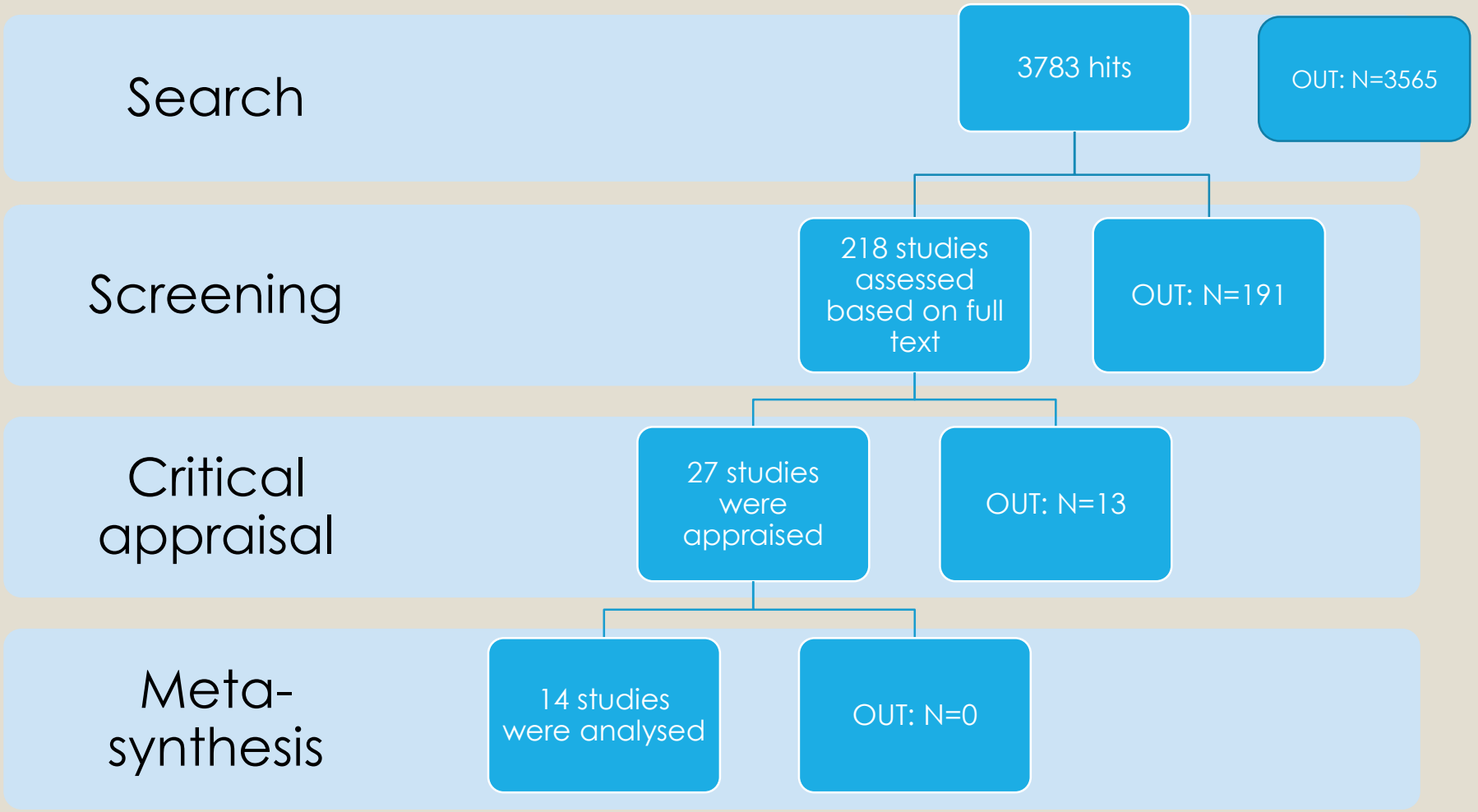
2. Professional Learning and Development, Corporate training and Lifelong Learning Research Group

The problem statement

- Team learning has mainly been investigated with a strong focus on effectiveness, mostly driven by the need to think in terms of performance outcomes of team members.
- Qualitative research evidence on how employees experience team learning has not yet systematically been synthesized:
  - **Why?** Their experiences may increase our understanding of why certain team learning processes can fail or succeed, what employees value and what may need to be adapted for a more successful implementation of team learning programs.

The research question

- How is team learning experienced by employees?
  - The meaning of learning
  - Opinions and beliefs about team learning
  - Positive and negative aspects of team learning
- Which implications for team learning practice and policy can be drawn from the synthesis?


Search
3783 hits
OUT: N=3565
Screening
218 studies assessed based on full text
OUT: N=191
Critical appraisal
27 studies were appraised
OUT: N=13
Meta-synthesis
14 studies were analysed
OUT: N=0

The search for studies

- An inclusive approach (1990 'The Fifth Discipline' - 2011)
- Initial scoping review to identify key words
  - **Topic of interest**: Team learning OR group learning OR collective learning OR cooperative learning
    AND
  - **Population & setting:** Employee, OR vocation* training/learning, organi?ation
- Information sources
  - Electronic search in 7 major databases
  - Handsearch in 13 topic specific journals

Screening for relevance

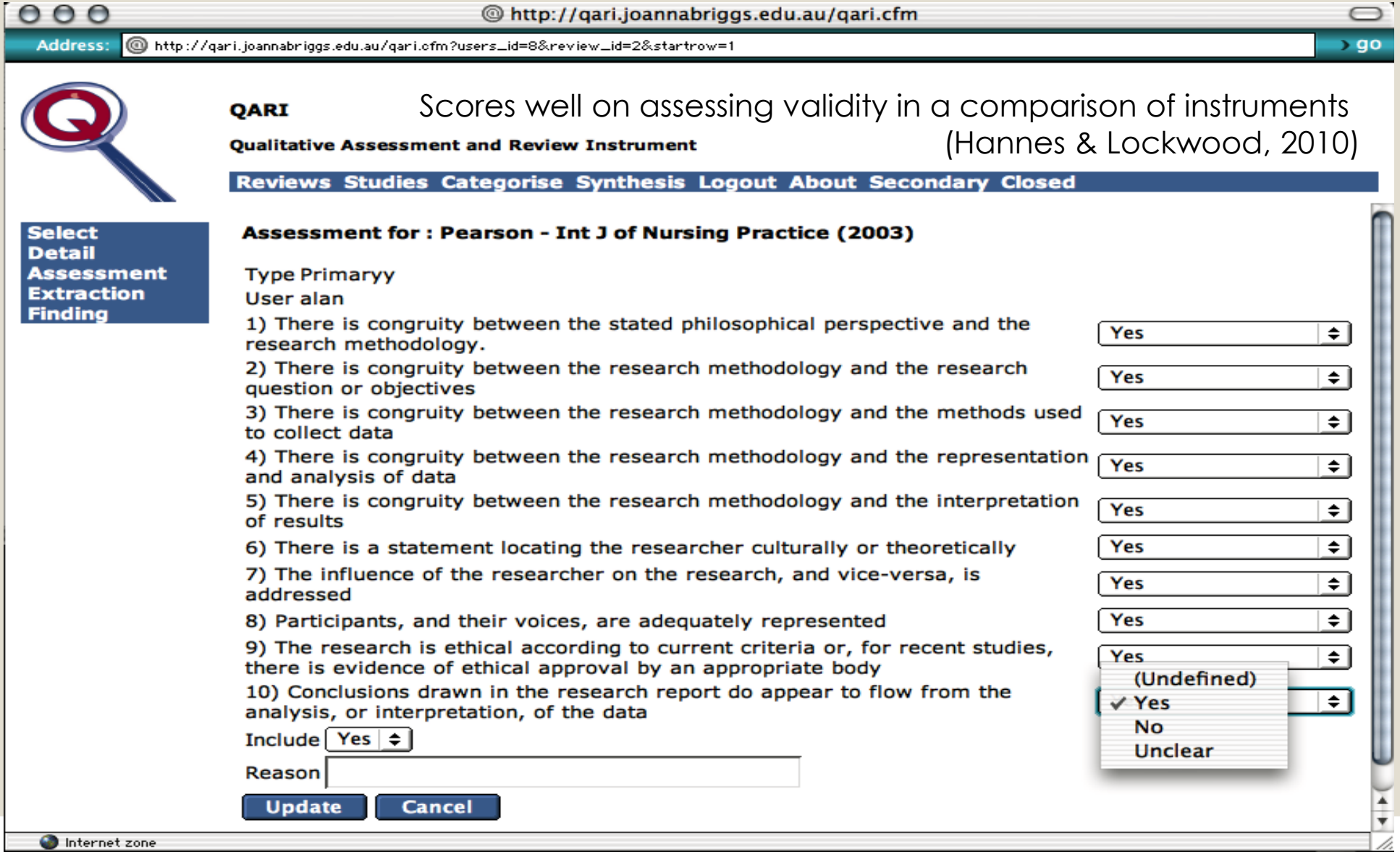
- S Setting Vocational learning or work setting
- P Population Employees/ adults /team members
- I Interest Team learning
- E Evaluation Experiences
  Opinions

- 'a compilation of team-level processes that circularly generate change or improvement for teams, team members, organisations etc. …'
  (Decuyper et al, 2010)

- A collective of individuals
- Shared responsibility outcomes
- Social entity embedded in system
- Manage relations across boundaries
  (Cohen & Bailey, 1997)

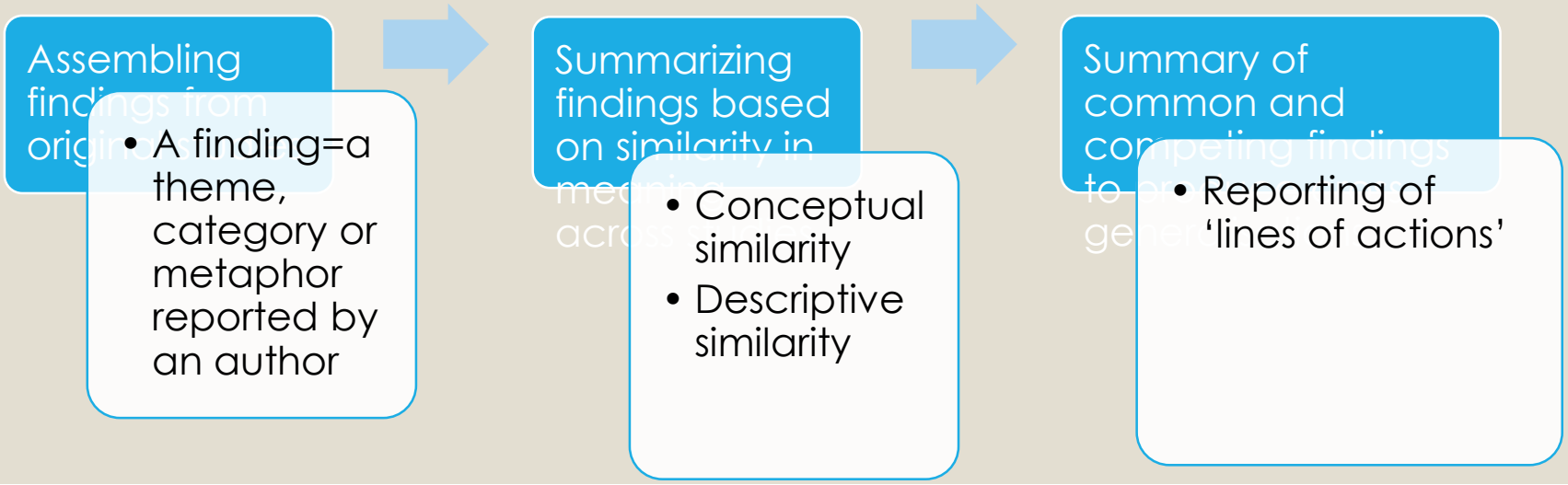
Types of studies: Qualitative, with a clear methods and results section

Critical appraisal of studies



Scores well on assessing validity in a comparison of instruments (Hannes & Lockwood, 2010)

The analytic process

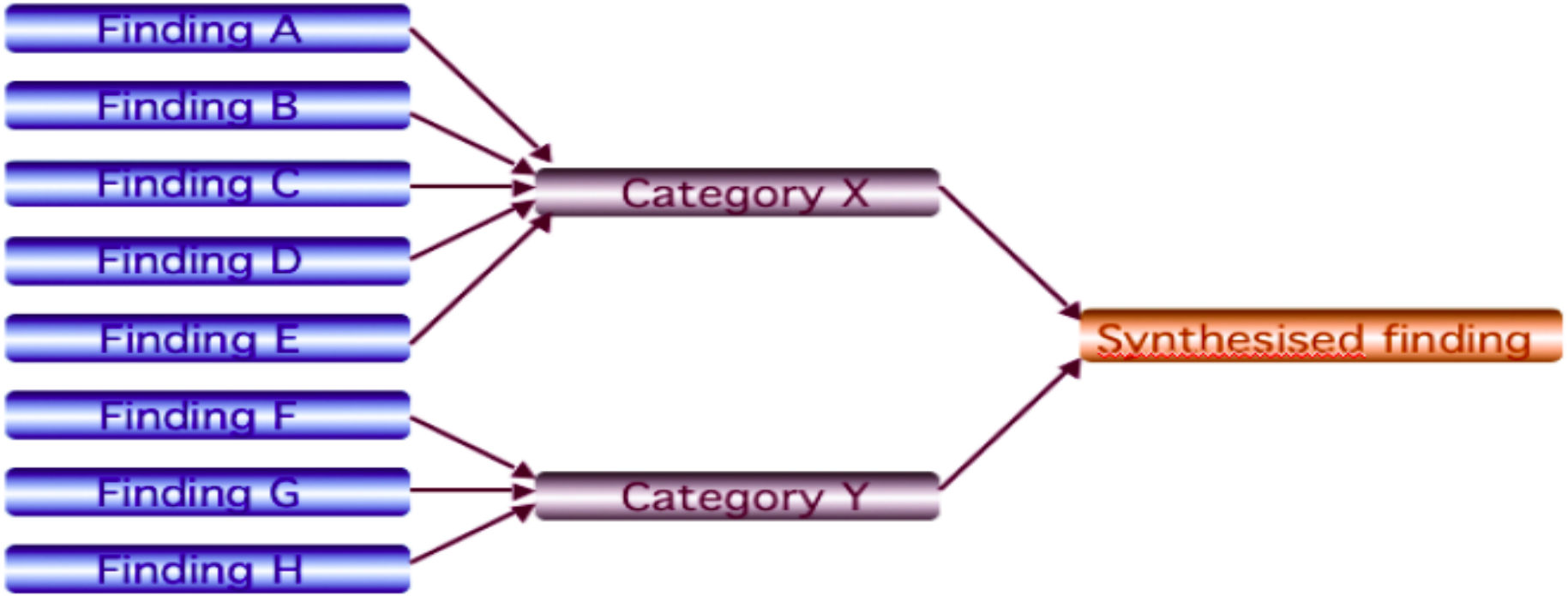


Level of evidence for findings:

Unequivocal: evidence beyond reasonable doubt that may include findings that are matter of fact, directly reported/observed.
Credible: evidence that is plausible in the light of the data but open to different interpretations.
Unsupported: evidence that is not supported by raw data.

Can be stated propositionally as "if-then" statements - for example: "*If students are advised reconsider their choice of study , their relatives will sometimes feel as if they are not involved*". (a somewhat awkward and eccentric form)

the declamatory form that emphasizes the probability of the claim: "*Relatives of students that are advised to reconsider their choice of study may feel as if they are not involved if strategies to include them are not pursued*".



Lines of action

S1: Whatever type of learning is occuring, four conditional processes should be taken into account: knowledge sharing, boundary crossing, communication and enabling learning factors

- **Category 1:** Different types of learning
- **Category 2:** Essential conditions for team learning
- **Category 3:** Enabling learning factors

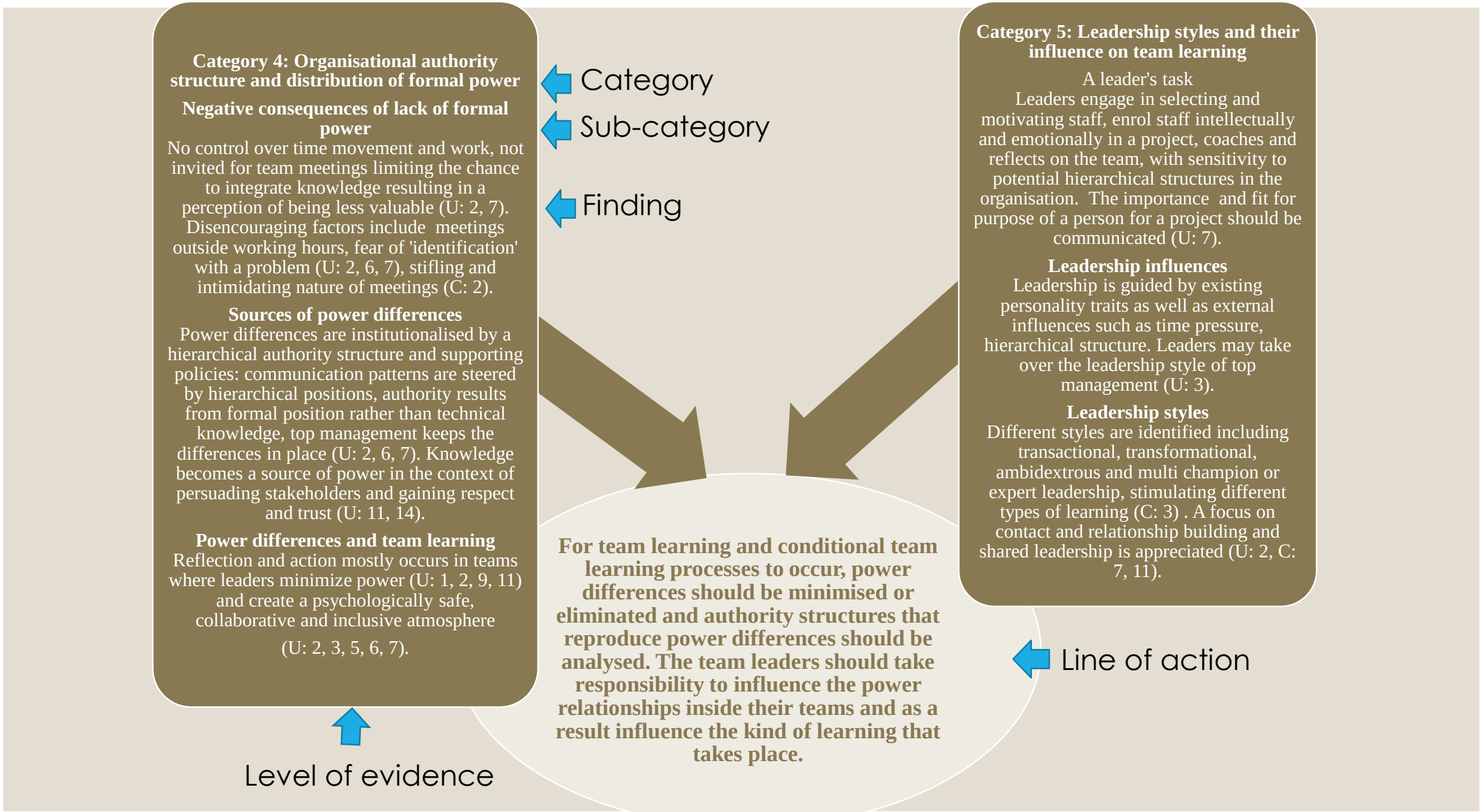
S2: For team learning to occur, power differences should be minimised, authority structures should be analysed and team leaders should take responsibility in these matters.

- **Category 4:** Organisational authority structure and distribution of formal power
- **Category 5:** Leadership styles and their influence on team learning

S3: No matter which pattern of team learning is promoted, reflective and active learning should always be part of the process.

Category 6: Descriptions of team learning

Category 7: Patterns of team learning


Category 4: Organisational authority structure and distribution of formal power
Negative consequences of lack of formal power
No control over time movement and work, not invited for team meetings limiting the chance to integrate knowledge resulting in a perception of being less valuable (U: 2, 7). Disencouraging factors include meetings outside working hours, fear of 'identification' with a problem (U: 2, 6, 7), stifling and intimidating nature of meetings (C: 2).
Sources of power differences
Power differences are institutionalised by a hierarchical authority structure and supporting policies: communication patterns are steered by hierarchical positions, authority results from formal position rather than technical knowledge, top management keeps the differences in place (U: 2, 6, 7). Knowledge becomes a source of power in the context of persuading stakeholders and gaining respect and trust (U: 11, 14).
Power differences and team learning
Reflection and action mostly occurs in teams where leaders minimize power (U: 1, 2, 9, 11) and create a psychologically safe, collaborative and inclusive atmosphere
(U: 2, 3, 5, 6, 7).
Level of evidence
Category
Sub-category
Finding
Category 5: Leadership styles and their influence on team learning
A leader's task
Leaders engage in selecting and motivating staff, enrol staff intellectually and emotionally in a project, coaches and reflects on the team, with sensitivity to potential hierarchical structures in the organisation. The importance and fit for purpose of a person for a project should be communicated (U: 7).
Leadership influences
Leadership is guided by existing personality traits as well as external influences such as time pressure, hierarchical structure. Leaders may take over the leadership style of top management (U: 3).
Leadership styles
Different styles are identified including transactional, transformational, ambidextrous and multi champion or expert leadership, stimulating different types of learning (C: 3) . A focus on contact and relationship building and shared leadership is appreciated (U: 2, C: 7, 11).
For team learning and conditional team learning processes to occur, power differences should be minimised or eliminated and authority structures that reproduce power differences should be analysed. The team leaders should take responsibility to influence the power relationships inside their teams and as a result influence the kind of learning that takes place.
Line of action

What we learned

- **S1** on conditional processes adds to the current results produced by quantitative studies and brings more sensitivity to the viewpoints of employees.
- **S2's** findings on power issues have not frequently occured in studies addressing team learning and could be further explored.
- **S3** on learning patterns supports the view that learning should not be formalised, however viewpoints were located at different positions on the formalisation spectrum. The issue remains undecided and open for discussion.

Limitations

- Full screening and appraisal by one, with 20% backup by another.
  - → potential bias?
- No expert consultation in search strategy
  - → sensitivity of the search?
- Decision to exclude findings that were unsupported
  - → sensitivity analysis?
- All studies were in Western contexts, hence coherent
  - → transferability of findings?

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Hannes K1, Aertgeerts B2, Goedhuys J2. In Acta Clinica Belgica 2012; 67(2): 99-107.

Obstacles to implementing Evidence-Based Practice in Belgium

- A **context-specific** qualitative evidence synthesis including findings from different health care disciplines.

1. Methodology of Educational Sciences Research Group

2. Academic Centre for General Practice

Context-specific versus multi-context reviews

Multi-context reviews

Exhaustive search

Little access to or knowledge of local databases and experts

Targets a broad audience (but no-one in particular)

Findings may be too general

Risk of downplaying important local characteristics

Context may get lost

Potential low level of acceptance in end-users

Wide ranging in scope

Ability to cross compare different settings

Works for topics were little heterogeneity between settings is expected

Findings are more likely transferable to a broad range of settings

Context-specific reviews

Selective search

(related to context)

Access to and knowledge of local databases and experts

Only relevant to the 'happy few'.

Findings are less likely transferable to other settings

Targeted audience

Highly relevant to practice and policy

Maintains integrity with the context reported in original studies

Findings may induce a higher level of acceptance in the end-users

The Research Question

- **Review Topic:**
  Obstacles to the implementation of Evidence-Based Practice in Belgium: a context-specific study

- **Question formulation:**
  - **Setting: Belgium (Belgian health care system)**
  - Population: Health Care Practitioners
  - (Phenomena of) Interest: Obstacles toward the implementation of Evidence-Based Practice
  - Comparison: (**additional literature search on strategies developed by countries with other systems**)
  - Evaluation: Experiences and perceptions

The Search for studies

- **Search strategy:**
  - Major databases: Medline, CINAHL, Psychinfo, Embase, Social Sciences abstracts and ERIC (1990-May 2008).
  - Where possible we used a methodological filter for qualitative research.
  - Other information sources:
    - '**Federal** research actions'-database from the Belgian governmental department of science
    - Consultation of **Belgian experts** in qualitative research methods and/or Evidence-Based Practice to check on any other published material that could be of use for the synthesis.
    - Screening of references
  - Keywords:
    - **Topic of interest**:'Evidence-Based Practice (Medical Subject Heading (MeSH) term)', including Evidence-Based Dentistry, Nursing and Medicine.
    - Additional keywords: evidence-based combined with the **geographical notion or setting**'Belgian', 'Flemish/Flanders' or 'Walloon'.

Screening for relevance

- **Inclusion criteria:**

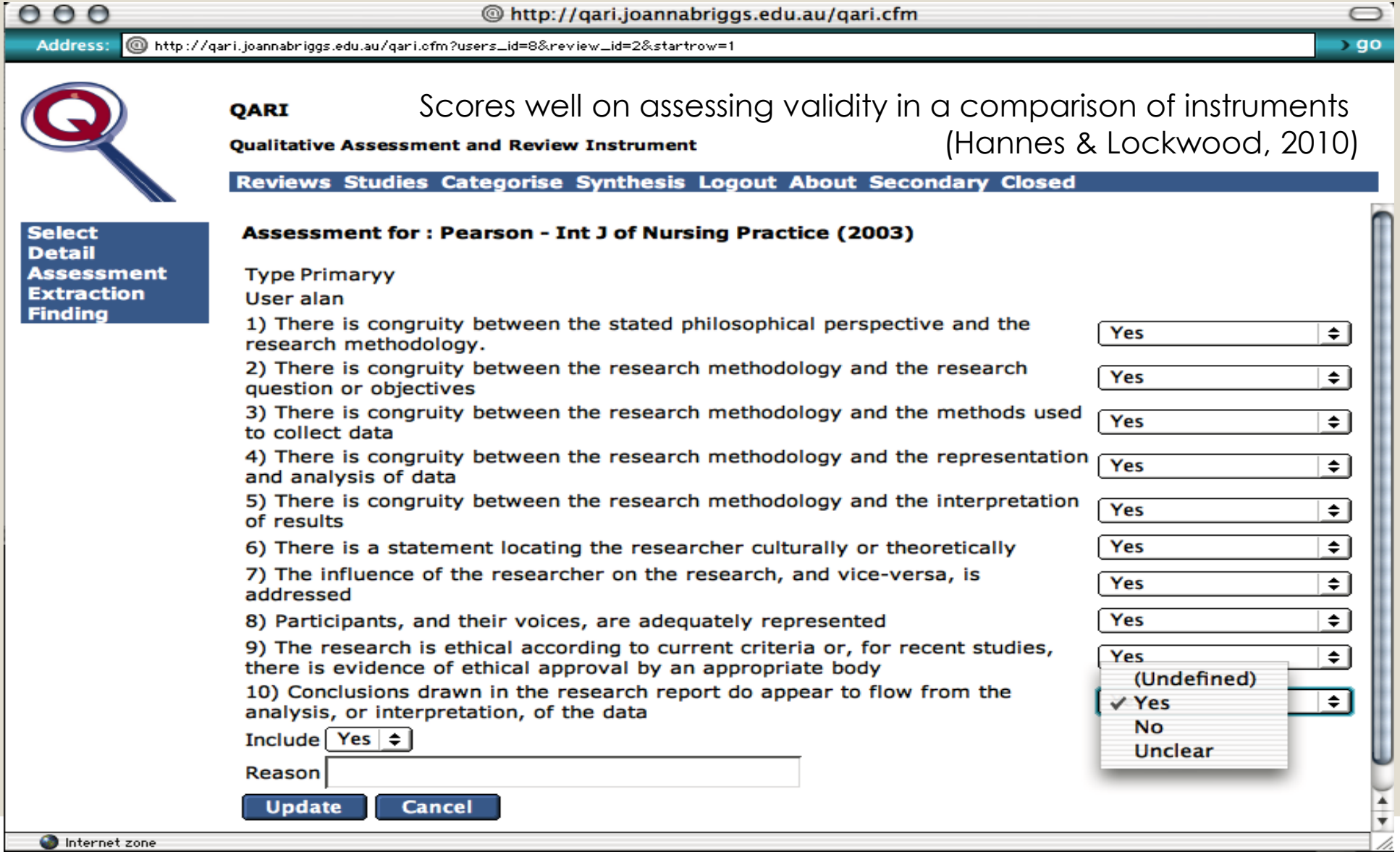
  - Study type: Qualitative, empirical research papers. Opinion pieces and descriptive articles were excluded.
  - Study participants: All types of health care practitioners e.g. physicians, dentists, nurses, physiotherapists, psychologists
  - Topic of interest: Obstacles to the implementation of EBP.
  - **Context: the Belgian health care system.**
  - Outcome of interest: Experiences and/or perceptions from participants.

8 studies met the inclusion criteria

Critical appraisal of studies

- **No criteria based quality appraisal**, although the software QARI provides a standard critical appraisal checklist.
  - **limited amount** of studies found
  - the majority of the selected studies were **written by the lead** reviewer, who would also be one of the appraisers.
- An overall judgment approach was used instead. This approach has been proven to deliver the same outcome (Dixon-Woods, 2007). However, it tends to be less explicit about potential reasons for exclusion.
- An evaluation based on the JBI-critical appraisal instrument is recommended for other review teams opting for a meta-aggregative approach to synthesis.

Usually we do appraise!

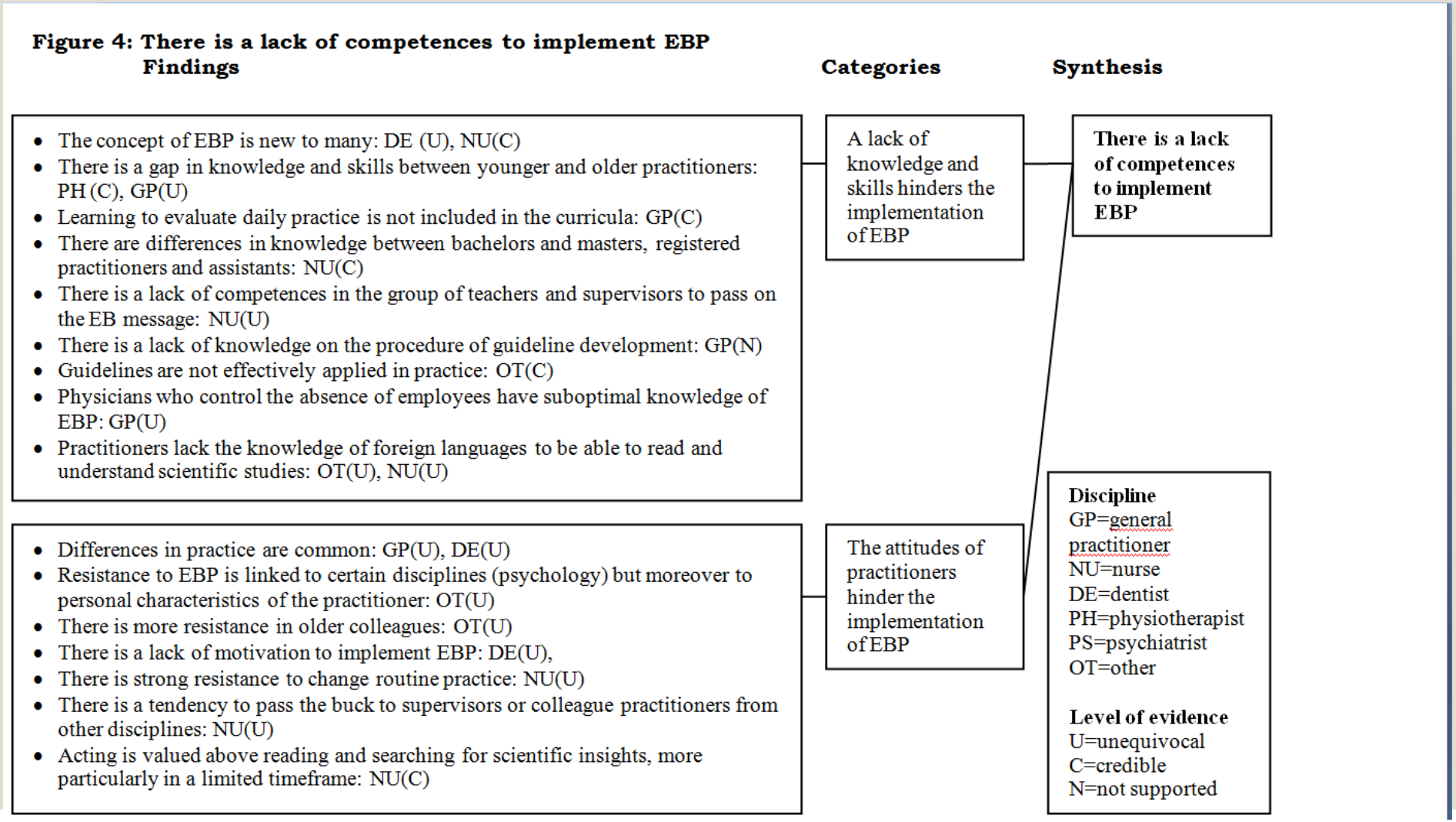


Scores well on assessing validity in a comparison of instruments (Hannes & Lockwood, 2010)

The analytic process

- 85 different original findings were found
- The findings were classified in 9 major categories
- These categories were further analysed to produce 4 synthesized statements
  - Synthesis 1: Evidence might have a limited role in decision-making processes in daily practice, *if the importance of the scientific component is not stressed* (**categories 1, 2 and 3**).
  - Synthesis 2: Aspects other than quality of care will steer the EBP agenda, *if governmental regulations and economic interests are contra-productive for delivering the best possible care* (**categories 4 and 5**).
  - Synthesis 3: Although EBP is intended to serve all practitioners, some health care providers will benefit less from EBP than others, *if inequity issues between practitioners are not solved and support for field workers is not established* (**categories 6 and 7**).
  - Synthesis 4: A lack of competences will hinder the implementation of EBP, *if gaps in knowledge and skills are not being filled and efforts to change contra-productive attitudes are not undertaken* (**categories 8 and 9**).

Meta-aggregation: example Synthesis 4



Lines of action

- **Selection of Implications for practice and policy**

  - Integrate EBP in the basic curricula (**synthesis 4**).
  - Provide easy and free access to well-structured, compact and relevant information targeted to a particular discipline and consider helpdesks**.** Screen information, control its quality and translate it to the field (**synthesis 1**).
  - Consider updating the Belgian nomenclature and reimbursement system to bring it in line with the latest evidence (**synthesis 2**).
  - Consider direct access to allied health services to increase autonomy (**synthesis 3**)

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